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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/706,640 | 11/12/2003 | Tmima Koren | 062891.1146 | 7017 |
| 5073 | 7590 | 10/28/2004 | EXAMINER | |
| BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980 | | | NGUYEN, ALAN V | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2662 | |

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/706,640 | KOREN ET AL. | |
| | Examiner | Art Unit | |
| | Alan Nguyen | 2662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9,26 and 28-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9,26 and 28-38 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 November 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/12/03</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. The preliminary amendment received on 12 December 2003 is acknowledged.

Claims 10-25, and 27 have been cancelled by Applicant.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 5, 7, 8, and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Koodli (US 6,608,841).

Regarding **claims 1, 4, 7, and 37**, Koodli discloses a method, system, and logic for performing compression, which comprises:

In the invention described by the Koodli, a method and apparatus for header compression is shown in figure 1 that receives packets (source terminal 20) coming from Host 22 at Network Interface Controller 24 to be compressed by Compressor 26, and this corresponds to the step of receiving at a compressor a flow comprising a plurality of packets, each packet having a packet identifier, the packet identifiers associated with a predetermined increment. A logic is also disclosed which is used to implement Koodli's apparatus. See column 15 lines 5-25;

Koodli discloses that compressor 26 communicates a session context identifier and sequence number that is used to maintain synchronization and detect packet loss. The changes to the packet identifiers are ignored. See column 2 lines 25-30. This corresponds to the step of ignoring a change in the predetermined increment associated with the packet identifiers;

Koodli discloses the compressor 26 that carries out packet compression, and this corresponds to the step of compressing the plurality of packets; and

Koodli discloses outputting the compressed packet to link 10 and further to destination terminal 30, and this corresponds to the step transmitting the flow to a decompressor.

Regarding claims **2, 5, and 8** Koodli discloses that compressor 26 communicates to decompressor 36 a session context identifier and sequence number that is used to maintain synchronization and detect packet loss, which corresponds to the step of receiving the flow at the decompressor, each packet of the flow having a sequence number. See column 2 lines 25-30; Koodli discloses the ability to detect and be protected from packet losses on column 8 lines 27-35. This corresponds to the step of detecting a skip in the sequence numbers of the plurality of packets of the flow; and accepting the flow having the skip in the sequence numbers. The ability in tolerating packet losses equates to detecting a skip in the number and accepting the flow.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 6, 9, 26, 28-36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koodli in view of Babbitt et al (6,618,757) hereafter Babbitt.

Regarding **claims 3, 6, 9, and 28-36** Koodli discloses the ability to detect when initial packets containing full headers to start a context stream are lost. See column 2 lines 60-65. This corresponds to the step of establishing that the flow comprises a compressed packet in the place of a full header packet; and establishing that the full header packet is lost. Koodli also discloses the method, means, and logic to establish a context identifier for a new stream. The initial packet is sent to decompressor 36 with the full header. Decompressor 36 then establishes a context state for that stream. See column 6 lines 65-77 and column 7 lines 1-15.

Koodli, however, fails to expressly disclose the step of determining that an inactive time associated with the flow has exceeded a maximum allowed inactivity period, the flow having a context identifier.

Babbitt discloses a system and method of IP address management that can reuse IP addresses that have been inactive for a finite amount of time. See column 12 lines 27-55.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Koodli's embodiment to have a means of determining a

time of inactivity for utilization of context identifiers, and reusing said context identifiers for other streams. The motivation is a desire to have an efficient and robust system that wisely allocates the use of resources by detecting unused identifiers. This will increase the reliability of Koodli's system, which is a first and foremost objective to accomplish in header compression schemes.

Regarding **claims 26 and 38** Koodli discloses that compressor 26 communicates a session context identifier and sequence number that is used to maintain synchronization and detect packet loss. The changes to the packet identifiers are ignored. See column 2 lines 25-30. This corresponds to the step of ignoring a change in the predetermined increment associated with the packet identifiers;

Koodli discloses the compressor 26 that carries out packet compression, and this corresponds to the step of compressing the plurality of packets; and

Koodli discloses outputting the compressed packet to link 10 and further to destination terminal 30, and this corresponds to the step transmitting the flow to a decompressor.

Koodli further discloses that compressor 26 communicates to decompressor 36 a session context identifier and sequence number that is used to maintain synchronization and detect packet loss, which corresponds to the step of receiving the flow at the decompressor, each packet of the flow having a sequence number. See column 2 lines 25-30; Koodli discloses the ability to detect and be protected from packet losses on column 8 lines 27-35. This corresponds to the step of detecting a skip in the sequence

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numbers of the plurality of packets of the flow; and accepting the flow having the skip in the sequence numbers. The ability in tolerating packet losses equates to detecting a skip in the number and accepting the flow.

Koodli further discloses the ability to detect when initial packets containing full headers to start a context stream are lost. See column 2 lines 60-65. This corresponds to the step of establishing that the flow comprises a compressed packet in the place of a full header packet; and establishing that the full header packet is lost. Koodli also discloses the method, means, and logic to establish a context identifier for a new stream. The initial packet is sent to decompressor 36 with the full header. Decompressor 36 then establishes a context state for that stream. See column 6 lines 65-77 and column 7 lines 1-15.

Koodli, however, fails to expressly disclose the step of determining that an inactive time associated with the flow has exceeded a maximum allowed inactivity period, the flow having a context identifier.

Babbitt discloses a system and method of IP address management that can reuse IP addresses that have been inactive for a finite amount of time. See column 12 lines 27-55.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Koodli's embodiment to have a means of determining a time of inactivity for utilization of context identifiers, and reusing said context identifiers for other streams. The motivation is a desire to have an efficient and robust system that wisely allocates the use of resources by detecting unused identifiers. This will increase

the reliability of Koodli's system, which is a first and foremost objective to accomplish in header compression schemes.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to header compression:

US Patent Publication (2003/0123485) to Yi et al

US Patent Publication (2002/0097722) to Liao et al

US Patent (6,680,955) to Le

US Patent (6,791,982) to Westberg

US Patent (6,788,675) to Yang

US Patent (6,751,209) to Hamiti et al

US Patent (6,711,164) to Le et al

IEEE article to Westphal

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 571-272-3089. The examiner can normally be reached on 9am-6pm ET, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVN
October 14, 2004



HASSAN KIZOU
EXAMINER
TECHNOLOGY CENTER 2600